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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,603	09/08/2003	Manfred Greschitz	L&L-10183	1769
24131	7590	06/14/2005	EXAMINER	
LERNER AND GREENBERG, PA P O BOX 2480 HOLLYWOOD, FL 33022-2480			LE, BRIAN Q	
			ART UNIT	PAPER NUMBER
			2623	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/657,603

Applicant(s)

GRESCHITZ ET AL.

Examiner

Brian Q. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01/24/2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 9-12 is/are allowed.
- 6) ☒ Claim(s) 5-6, 8, 13-14 and 16-17 is/are rejected.
- 7) ☒ Claim(s) 7 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **Response to Amendment and Arguments**

1. Applicant's amendment filed January 24, 2005, has been entered and made of record.
2. Applicant's arguments, see "Remarks/Arguments", filed January 24, 2005, with respect to claims 1 and 13 have been fully considered and are persuasive. The rejection of independent claims 1 and 13 and their dependent claims has been withdrawn.
3. Applicant's arguments with regard to claims 5 and 17 have been fully considered, but are not considered persuasive because of the following reasons:

Regarding claim 5, the Applicant argues (page 13) that Setlak does not disclose or suggest that the phase of the AC voltage is settable. The Examiner respectfully disagrees. Setlak clearly teaches this concept at page 3, lines 23-30, "the first AC voltage having a settable phase (first reference voltage input with setting of the range) and the second AC voltage having a settable phase (second reference voltage input with setting of the range)".

For new dependent claim 17, the Applicant argues (page 14) that Setlak also does not teach the second AC voltage is independent of the first AC voltage. Again, the Examiner respectfully disagrees. Setlack discloses two different input voltages and thus they are independent from each other since the second input voltage has nothing to do with the first input voltage (page 3, lines 23-30).

Thus, the rejections of all of the claims are maintained.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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5. Claim 17 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed limitation “the second AC voltage applied to said protective electrode is independent of the first AC voltage applied to said sensor electrodes” is not supported in the original disclosure.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 5-6, 13-15 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Setlak WO 98/52157.

Regarding claim 5, Setlak teaches a fingerprint sensor (page 1, first 2 lines), comprising:

a contact surface for contacting an underside of a finger and for recording a fingerprint of the finger (FIG. 1-3 and page 5, lines 10-15);

a plurality of sensor electrodes mounted below said contact surface (separate by the insulting layer) (page 5, last paragraph); and

at least one protective electrode mounted on or in said contact surface, said protective electrode incompletely covering said plurality of sensor electrodes (FIG. 5-6, element 80);

said plurality of sensor electrodes having a first AC voltage being applied (page 3, last paragraph) at a prescribed frequency (page 5, last paragraph);

said protective electrode having a second AC voltage (page 3, last paragraph) being substantially applied at the prescribed frequency (page 5, last paragraph);

the first AC voltage having a settable phase (first reference voltage input with setting of the range) and the second AC voltage having a settable phase (second reference voltage input with setting of the range) (page 3, lines 23-30).

Regarding claim 6, Setlak further teaches the fingerprint sensor according wherein said protective electrode is formed as a grating, a grid, or a strip (FIG. 5-6, element 80).

Referring to claim 13, please refer back to claim 5 for the teachings and explanations.

For claim 14, please refer back to claim 6 for the teaching.

Regarding claim 15, please refer back to claim 3 for the teachings and explanations.

For claim 17, Setlak discloses the fingerprint sensor wherein the second AC voltage applied to said protective electrode is independent of the first AC voltage applied to said sensor electrodes (Setlak discloses two different input voltages and thus they are independent from each other since the second input voltage has nothing to do with the first input voltage (page 3, lines 23-30)).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 8, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Setlak WO 98/52157 and further in view of Kramer U.S. Patent No. 6,512,381.

Regarding claim 8, Setlak teaches a method for optimizing the sensitivity of a fingerprint sensor (page 14, lines 6-19), which comprises:

providing the fingerprint sensor according to claim 1 (please refer back to the explanation of claim 1); and

the sensitivity (the sensing ability of ridges and valleys) is determined by a local resolution of the fingerprint sensor (resolution of A/D converters which are signals from the sensor) (page 13, lines 22-27).

Setlak does not teach the setting of at least one of the amplitude of the second AC voltage and a phase of the second AC voltage such that a sensitivity of the fingerprint sensor assumes a maximum value. Kramer teaches a method of improving the sensitivity of the fingerprint sensor (abstract, first line) wherein the amplitude of voltage and phase of voltage (difference between the highest possible output voltage and the lowest possible output voltage during a measurement) such that sensitivity of the fingerprint sensor assumes maximum value (column 6, lines 25-39). Modifying Setlak's method of improving the sensitivity of the fingerprint sensor according to Kramer would be able to determine the sensitivity of the sensor based on the ability to distinguish

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between maximum signal output and the minimum signal output (column 6, lines 25-28). This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Setlak according to Kramer.

For claim 16, please refer back to claim 8 for the teachings and explanations.

***Allowable Subject Matter***

10. Claims 1-4, and 9-12 are allowed.
11. Claims 7 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Reasons for Allowance**

12. The following is an examiner's statement of reasons for allowance:

Regarding claims 1 and 9, the prior art of record does not show the limitation of a fingerprint comprises "the second AC voltage having an amplitude being greater than supply voltage for the fingerprint sensor" in combination with other limitations of the claim.

***Conclusion***

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.



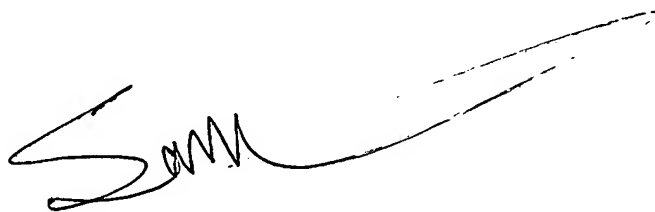
**Contact Information**

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 571-272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 571-272-7414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5397 for regular communications and 703-308-5397 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

BL  
June 2, 2005

A handwritten signature in black ink, appearing to read 'Samir', with a long horizontal flourish extending to the right.

**SAMIR AHMED  
PRIMARY EXAMINER**